

REMARKS

Upon entry of the claim amendments, claims 11-25 are all the claims pending in the application. Claims 1-10 have been canceled, and claims 11, 15-16, 18 have been amended. New Claims 19-25 have been introduced. Support for the claim amendments and new claims can be found throughout the specification and originally filed claims, especially at pages 3-4, Examples 3, and original claim 11.

Further, the specification has been amended to include the corresponding SEQ ID NOS.

Accordingly, no new matter has been introduced by these amendments. Entry and consideration of the amendment are respectfully requested.

A. Objections to Specification

Specification is objected to because, while page 17 lines 23-25 and page 18 lines 7-10 recite peptides for which a SEQ ID has been provided, the sequences are not identified as “SEQ ID NO:” as required by 37 CFR 1.821(d).

In response, Applicants have amended the specification to include the corresponding SEQ ID NOS:.

B. Claim rejections under 35 U.S.C. § 112, first paragraph

Claims 11-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

In making the rejection, the Examiner asserts i) that the unpredictability in the functional effects of amino acid additions is high and ii) that the claimed genus is large without requiring a significant structural core because the present claims are drawn to peptides in which one or more amino acids are added to the sequence at any position. Moreover, the Examiner states that there is no specific disclosed correlation between structure and function, and that it is unclear what structural core elements are required for the recited function.

The Examiner concludes that, while having written description of compounds identified in the specification tables and/or examples, the specification does not provide sufficient descriptive support for the myriad of compounds embraced by the present claims.

In response, Applicants have amended independent claim 11 to recite the specific amino acid sequences identified in the specification tables and/or examples. Specifically, present claim 11 recites specific amino acid sequences of SEQ ID NOs: 2 and 3, and X_n -Met-Ala-Pro- Y_m in which n is 0 or 1 and m is 0 or 1 (with proviso that when n is 0, m is not 0). Dependent claims 12-16 depend from claim 11.

Accordingly, Applicants respectfully request that the above rejection under 35 U.S.C. § 112 be reconsidered and withdrawn.

C. Claim Rejections - 35 U.S.C. § 101

Claims 11-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In making the rejection, the Examiner states that Reid et al. (Appl Microbiol Biotechnol “comparison of bovine b-casein hydrolysis by P1 and Piii-type proteinases from Lactobacillus lactis subsp. Cremoris” (1991) 36:344-351) teaches a naturally occurring bovine beta-casein comprising Met-Ala-Pro (i.e. SEQ ID NO:1 of the instant invention) as recited in the instant claims.

In response, Applicants have amend claim 11 to recite “[a]n isolated peptide” to specify the claimed invention is directed to an isolated peptide, which clarifies that the claimed peptide excludes products present in its naturally occurring form.

Applicants traverse the rejection of claims 12-16, because claims 12-16 are directed to an inhibitor, food or drink or a pharmaceutical composition, which all fall in the statutory patentable

subject matter categories as provided in 35 U.S.C. § 101. In addition, claims 12-16 refer to claim 11, which in its currently presented form, recites “an isolated” peptide.

Accordingly, Applicants respectfully request that the above rejection under 35 U.S.C. § 101 be reconsidered and withdrawn.

D. Claim Rejections - 35 U.S.C. § 102

i) Claims 11-16 are rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Reid et al. (Appl Microbiol Biotechnol “comparison of bovine b-casein hydrolysis by PI and Piii-type proteinases from Lactobacillus lactis subsp. Cremoris” (1991) 36:344-351; “Reid”). The Examiner relies on Reid as teaching a bovine beta-casein comprising Met-AlaPro (i.e. SEQ ID NO:1 of the instant invention). Moreover, in Reid, a digested portion of the beta-casein is separated by HPLC, and one of the resulting peaks (peak 11) contains the peptide comprising Met-Ala-Pro (Table 1).

ii) Claims 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen (US 2002/0172692). Cohen is relied upon to teach the peptide Met-Ala-Pro and a protein (“RTS”) which comprises the sequence Met-Ala-Pro.

iii) Claims 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Parry *et al.* (WO 02/098448; “Parry”). The Examiner relies on Reid as teaching a peptide with an amino acid sequence of RGHCRDSRCMMMNAPG, which is “an amino acid sequence in which one or more amino acids are added to the amino acid sequence represented by SEQ ID NO: 1.”

Applicants have amended claim 11, solely to expedite the prosecution. Applicants respectfully assert that the current amendment to claim 11 renders moot the above claim

rejection under 35 U.S.C. § 102(b), because the cited art fails to disclose each and every element of the presently claimed invention.

As pointed out in M.P.E.P. § 2131, “[t]o anticipate a claim, the reference must teach every element of the claim.” Thus, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).” Applicants respectfully assert that the Office Action failed to provide a prior art reference that teaches every element as set forth in the amended claim.

Independent claim 11, as amended, recites the specific amino acid sequences of SEQ ID NOs: 2 and 3, and X_n -Met-Ala-Pro- Y_m in which n is 0 or 1; m is 0 or 1 (with proviso that when n is 0, m is not 0). Claims 12-16 refer to claim 11.

Applicants respectfully assert that none of the above cited references disclose the specific amino acids as set forth in claim 11.

Accordingly, Applicants respectfully request that the above rejections under 35 U.S.C. § 102 be reconsidered and withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number **202-775-7588**.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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